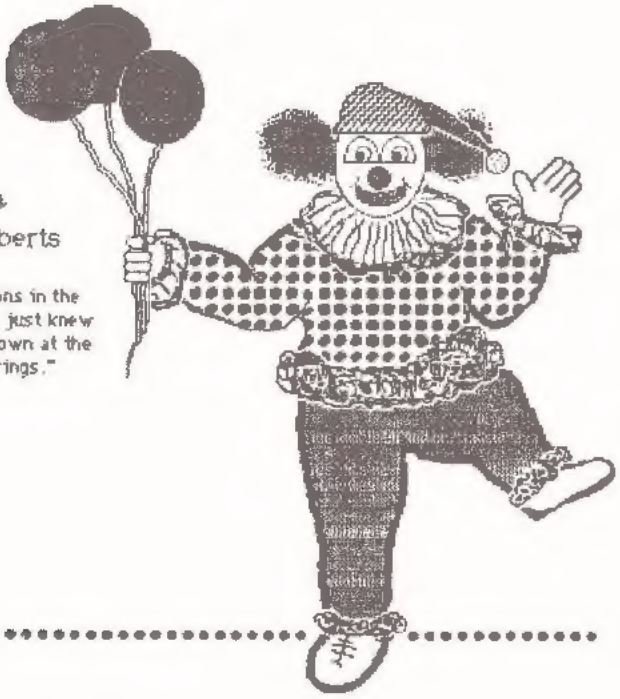
OTTAWA HOME COMPUTING

June 10, 1985
Vol. 2, No. 1
$1.60

Inside...

Mac T. Knife



Funny Clown

by Karen McRoberts
Evansville, IN

"When I saw the balloons in the MacPaint™ manual, I just knew they had to have a clown at the other end of their strings."

RENEWAL TIME

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OTTAWA HOME COMPUTING

OTTAWA HOME COMPUTING is the newsletter of the Ottawa Home Computer Club. Membership is open to all with a genuine interest in personal computing for $15/year in Canada. Membership includes OTTAWA HOME COMPUTING. Meetings are usually held on the third Monday of each month, 7:30 PM, at Charlebois High School, corner of Heron Road and Alta Vista Drive in Ottawa.

When submitting articles please print or type with a fresh ribbon, 8-1/2 x 11 inch white paper, double-spaced on one side only. Leave one-and-a-half inch borders on all four sides.

Permission to reprint articles appearing herein is hereby granted, provided credit to both the author and Ottawa Home Computing is given.

Advertisements of personal items up to 25 words for one insertion per issue are free to members. Inquire for commercial rates.

EDITORIAL
by Bob Mason

This is my first editorial and in the tradition of most past editorials, I'll begin with a plea for help. We need help in two areas: the writing of articles and participation in the newsletter committee.

The writing of articles, letters, helpful hints, or even questions is perhaps what we need most. The Newsletter depends on your submissions if it is to survive. Computer art and cartoons also have a place in this newsletter. Most of the art in this issue, including the cover drawing of Jim Butterfield, come courtesy of Scotty Adams. There must be some budding artists out there.

The second area for participation is on the Newsletter Committee -- which is about to be formed. This committee will be doing the actual work of putting the Newsletter out -- covering meetings, talking to members, putting the paper together, and choosing the direction the newsletter should be going in (in conjunction with the executive).

If you are interested in participating in either of these areas, talk to me at the next meeting, or give me a call. I'll be announcing the date and location of committee meetings at the next general meeting.

The Newsletter is published 10 times a year, monthly except during the summer when it becomes a bimonthly. There won't be an issue next month, but with the August issue, we'll be back on the monthly schedule.

June 17, 1985 - AGENDA

7:30 Disk of the month
Membership sales
Socialization

8:00 Business Meeting

8:20 Machine-specific groups

9:00 BASIC Training courses

9:30 Special Interest Groups
COMAL
Forth
Disk of the month
Etc.

This schedule is tentative but a more complete listing, with courses and rooms, will be posted at the meeting.

JULY RUMMAGE/SWAP

On our July 22 meeting, we will be trying something new. We will be holding a 'Rummage/ Exchange/Swap' for all that obsolete computer equipment and software that you don't want anymore and were going to throw out anyway,or are simply storing in your attic. Remember, your junk is another person's treasure. So if you've got an old computer, or cables or peripherals, or software that you haven't used for the last six months or year, maybe you should think about bringing it in to see what you can get for it.

WARNING NUMBER 1

This night is intended for the exchange of personal items only. All items will be inspected and tagged at the door and retail goods will not be allowed in.

WARNING NUMBER 2

No copied software will be allowed, and if found, the holder will be asked to leave. Only original software will be allowed. What you do on your own time is up to you. But pirated software cannot be sold or traded on the school property or under club aspices.

More information on this evening will be available at the next meeting.

APRIL MINUTES
by Wayne D. "Skip" Schaler"

April's meeting opened with a welcome from our president, Mr. Brian Morrow who informed us of the agenda for that night and the upcoming three months. The latest computer oriented developments, particularly those relating to Commodore, were also touched on. He ended with the announcement that the annual elections for the executive would be held on May 27.

On the Apple side of our club, Scotty Adams delivered an amusing talk on computers that came from one of Andy Rooney's columns. She promised more up-to-date news and developments at next month's meeting.

The Cafetorium was equipped with six colour monitors and two microphones and the stage held a large screen projector on which our guest speaker displayed computer images to demonstrate concepts from his talk.

Mr. Jim Butterfield delivered an intriguing and often amusing talk on computers and programming techniques. His casual and disarming approach made even those who were new to programming very relaxed and quite receptive to the concepts that he was trying to put across. Even among veteran programmers many new ways of

looking at programming were discovered. In short there was something for everyone.

At 9 o'clock there was a short ten minute break during which time some people went to take part in special interest groups such as FORTH and COMAL. Most however came back and took part in the question and answer sessions with Mr. Butterfield that lasted from 9:10 until 10:00 p.m. when the meeting broke up.

In the question and answer session, audience questions were posed to Mr. Butterfield on areas covered by the talk and on many other areas of interest to computer users. The questions ranged from courses on machine language to the latest computing hardware and software and the questions came from young and old alike.

Although our meeting ended at ten that night, Mr. Butterfield stayed on an extra night so that he might talk to our affiliate club in Kanata.

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MAY MINUTES
by Bob Mason

The May meeting commenced at 8 o'clock with Brian Morrow giving news on the new Commodore 128.

The main business item on the agenda was the election of the executive. The executive nominated several people, and nominations were also received from the floor. After nominations closed, Paul Irwin, the only nominee for President, was asked to give his views on the direction of the club. He felt that the strength of the club was in its diversity -- various machines, a wide range of types of people and age groups, etc. He said that the executive must be sensitive to the needs of the many smaller groups within the club, and responsive to major new directions (not fads) that home computing will be taking.

After Paul's talk, Brian again asked for nominations for the executive. Hearing none, he declared nominations closed, and the executive was elected by acclamation. He then asked for a show of hands indicating approval or disapproval of the executive, and approval was virtually unanimous, with no disapproval indicated.

The new executive is:

President: Paul Irwin
Treasurer: Brent Goss
Membership: Mike Bryan
Bulletin Board Editor: Don White
Newsletter Editor: Bob Mason
Apple Librarian: Scotty Adams
Commodore Librarian: Paul Anderson
Education Director: Wayne Schaler
Directors at Large: Marv Bero, Pierre Castricum, Dave Melam

After the election, Scotty Adams showed several posters, books and other things she had collected, both for Apple and Commodore. She then proceeded to draw names of members, with each winner present selecting his or her own prize, until all the prizes were distributed. Those of you who weren't in attendance missed some good prizes.

The main talk of the evening was given by Sid Bernstein of Dynamedia Corp., a distributor of diskettes. Mr. Bernstein described, with the aid of overhead projections, the various configurations of diskettes, their manufacture and certification. He felt that the main criteria in selection of diskettes should be

the certification standards of the diskette as chosen by the manufacturer. Then he described several of the most common cases of mishandling of diskettes. Several involuntary shudders went through the audience as diskettes were stapled, folded and bent. He also gave a couple of good reasons why single-sided diskettes should not be notched and flipped over for use in a single-head drive.

Wayne Schaler then gave a brief description of upcoming meetings, and the meeting broke up into special interest group meetings.

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ADAMS APPLE NOTES

It must be time again to explain how the APPLE library works. We have no disk of the month; instead we have a library with over 200 disks that are all accessible at any time. There are eight catalogs of the complete listings of every disk at the meetings. About half of these are annotated, the rest are more or less by subject. There are specific interest disks like games, math, utilities, business, physics, art, music, etc., and many mixed interest ones. To place an order, list the disk number(s) wanted and give them to the librarian, Scotty Adams, along with the appropriate number of blank disks. They are ready for you at the next meeting for the fee of one dollar a disk. The profit from this goes to buy new disks for the library and the upkeep of the library (binders, sleeves, labels, etc.)

It would be lovely to have a better than one month turnaround, but people were calling continually to ask if their disks were ready yet and could they come over and pick them up. Since many months have more than 50 orders, this made life a bit more complicated than usual, so I'm no longer willing to provide a speedy custom service. However I am looking for an apprentice or assistant to help reorganize the library to better serve those with specific requests... "what do you have to teach math to a 6-year-old, what do you have on mortgages, what disk do I order for modems" and the like.

Any disk that doesn't run on your IIc may be exchanged for another disk free... I don't have a IIc to check it on and the only way I'll know is if you tell me. If they don't run on your (ahem) clone, I'm sorry. Another thing... It's really not nice to buy disks for your non-member friends. In conclusion, I'd like to thank all the members who have contributed disks and/or documentation for the programs. Without you we would have a much less rich catalog. We seem to have a bigger library than the Toronto Apple group, thanks to you.

Scotty Adams

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SOFTWARE REVIEW
by Jim Sutton

****

ASYLUM
by Screenplay

****

The objective of ASYLUM is to escape from the mental hospital to which you have been committed (after having spent too much time in front of your computer, no doubt). 'Ho hum, another maze game', you say? Well perhaps, but I think this one has some features which merit a second look.

Your perspective as the first screen appears is as a participant in the maze (i.e. not looking down from above). The screen shows what you would see while looking in a single direction; cursor keys are used to change direction.

A hint given at the beginning implies that the only way out is to impersonate a doctor and leave through the staff exit. Along the way are many locked doors and a multitude of the kind of colourful characters you might expect to meet in a tongue-in-cheek institution of this nature.

While the documentation is sparse, there are 4 HELP screens available which provide valuable information on VOCABULARY, an INVENTORY of the objects you carry, and a SLIDE SHOW which offers pictures of some of the people and places you may encounter. You may also SAVE up to 8 games in progress.

All of this is fine, but how well does it play? I've never been good with the kinds of games which require hours of studying a manual before I can start; nor am I fond of those games which take hours of sitting in front of the monitor while my character gets killed over and over again as I try to get him past the first four moves.

ASYLUM can be somewhat bewildering at first; however, after only a short time (and a couple of encounters with some pretty strange creatures) I began to feel like I was getting somewhere. I haven't managed to escape yet, but ASYLUM has kept me challenged and entertained -- and that's what it's all about, isn't it.

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SOFTWARE REVIEW
by Jim Sutton

****

Julius Erving & Larry Bird Go
ONE-ON-ONE
by Electronic Arts

****

By the time I got around to buying a home computer, all the magazines were heralding the death of the 'Shoot the Space Alien' genre of game. It did not take long for me to realize, however, that there are still an incredible number of computer games on the market in which skill with a joystick is all that matters. It has taken only limited contact to convince me that I get bored rather easily with this type of game.

"ONE-ON-ONE Basketball" is a joystick game with a difference. To be sure, dexterity and good hand-eye co-ordination are important, but the designers of this game have managed to capture the essence

continued on page 13

WORD PROCESSING WITH PAPERCLIP

by Dennis White

PaperClip is produced by the small Canadian software company known as Batteries Included - an odd handle for any company by any stretch of the imagination.

Although popular, and really professional, **PaperClip** does not share the limelight with other word processors such as **Wordpro** or **Easyscript**. Most magazines seem to ignore its very existence.

The biggest complaint thrown at **PaperClip** is that it does not have "word wrap". This means that words which cannot be completed on one line are automatically transferred to the next line. Rarely do we hear that neither **Wordpro** nor **Easyscript** have word wrap.

PaperClip uses "word stream". Word stream will break any word which dares to be too long to fit on the end of a line and will rudely push the end of the word on to the next line.

For seasoned users of word processors with word stream. Word stream poses no problem: in fact, they prefer word stream and find the constant jumping around of words in programmes with word wrap a little annoying. (The popular Speedscript uses word wrap.)

PaperClip has all the niceties of the best word processors including insert, delete, erase, move, copy, search and replace, find, and hunt. It also has some powerful column and disk commands not found in many other word processors. And the printer utilities of **PaperClip** leave little to be desired.

Column Commands

Columns can be set for widths up to 250 characters. (This is the absolute width that **PaperClip** is capable of, so such a width would legitimately only be used for the column sorting function.) Columns can be deleted, erased, moved, inserted between other columns, replicated or shifted up, down, sideways or obliquely.

Columns can be sorted alphanumerically in ascending or descending order and, when the sort covers a number of columns, the columns to be sorted can be indicated. Subsorts can also be made.

Columns of figures can be added vertically and horizontally. Numerical tabs can be used to position the decimal point for each column and for each total.

Disk Commands

Disk commands are similar to DOS 5.1 and provide format, scratch, initialize, validate, rename, copy, duplicate, and validate, and include disk error readout. (Duplicate is only available for dual disk drives.)

Load, save (and block save), and append are under direct two-key commands. When saving to a file name already on disc, **PaperClip** is gracious enough to ask if you wish to replace the existing file with the new file. Isn't that nice ?

A novel approach is the ability to display directories without overwriting memory (similar to the diR command in BASIC 4.0), or to load (or append) directories into memory. (This is useful for making print-outs or for saving directories to disk).

PaperClip can read the name from the displayed directory (or displayed text) for use in disk commands (or for the search and replace facility). Thus ensuring that no typing errors are made (no more "file not found" messages).

The device numbers for drives (and printers) can be changed by using the **PaperClip** commands. It is possible, and often desirable,

to print to a disk instead of to a printer. (This facility is most useful when you wish to chop up columns of text for printing side by side. The "printout" is saved as a sequential file.)

Printer Utilities

More than 24 different printer files are available on the PaperClip disk and they cover almost every available printer. In the unlikely event that you may have a printer which is not included, the manual provides instructions for setting up printer files for other printers. If your printer is not included in the supplied printer files it is more than likely that one of the files will be suitable for your printer. For instance, the Smith Corona TP-1 printer file is suitable for any ASCII printers with backspace and underline characters. The file for the Commodore 8300P printer is suitable for most Diablo and Qume printers, and some C.Itoh Starwriters.

PaperClip will support serial printers on the RS 232 C port (you will need a Data 20 printer interface, Commodore 1011A, or Batteries Included BI 232-1). The RS 232 parameters (baud rate up to 9600, word length up to 8 bits, parity, and handshaking) can be merged into the **PaperClip** programme so that you do not have to enter them every time you boot up. (The printer file can be merged in to the processor as well, so that it boots up ready for a particular printer.)

PaperClip will support multilingual or special characters on your printer. Alternative display characters enable **PaperClip** to provide multilingual characters on the screen (except in the 80 column mode).

Writing Utilities

A useful writing aid is the ability of **PaperClip** to store phrases for recall with a two-key command. With this utility it is possible to designate a phrase for each letter of the alphabet and write it to the screen on command. (The name **PaperClip** in this article is an example of using this command.)

Other utilities include the transfering of blocks of text from one file to another, and the merging of data from one file to another for the production of form letters, etc.

Versions of PaperClip

There are different versions of **PaperClip**. Version D is the most powerful and the most recent. It has an 80 column screen display in the output mode and some commands have either been extended or made easier to use. (The 80 column mode may be disappointing for some since it does not allow scrolling of the output text as does the 40 column mode. Nor does it allow the use of the multilingual charac ter display.)

The most useful changes particularly affect the search and replace utility and allow the user to define precisely what **PaperClip** is to search for, as an examplee, [the] will now cause **PaperClip** to search only for "the" as one word, [the will search for "the" at the beginning of a word as well as one word, the] will also search for a "the" at the end of a word, and 'the will search for "the" but not "The".

Word processors for the 64 are often graded by the number of lines that can be entered before they run out of memory, so here are some statistics: version B is good for about 500 lines, and both C and D about 400. (**PaperClip** prompts you with an 'Out of Memory' flag when there is no more memory available for text: not every word processor does that, you know.) When **SpellPack** is installed, either as a separate programme or in the combined programme, the number of available

lines drops below 400. If you want the most lines: then opt for version B and forego **SpellPack**.

I use version B for preparing (or updating) alphabetical listings of combined club disk directories. Using the directory command, CTRL 3, I am able to append one disk directory after another. I add the disk number to the end of each entry using the replicate command for columns. **PaperClip** sorts the whole lot and and I chop up the columns into page size lengths and print three or four columns to a page. I can then easily identify the disk any programme is on. All of this may sound quite strange but I offer it as an example of what can be done. **PaperClip** will automatically place the page number and the header on each page too?

PaperClip will also produce, and automatically save, a table of contents complete with page numbers.

Addons for PaperClip

The addons used with **PaperClip** include printer interfaces and 80 column display units, they also include anything which is not Commodore, of course, such as printers and disk drives.

PaperClip is compatible with most printer interfaces. However, the printer interface must be set to provide no translation. **PaperClip** provides all necessary code manipulation for parallel feed ASCII printers.

MSD Drives - **PaperClip** is fully compatible with the MSD drives, particularly the MSD 2.

Batteries Included Buscard II is ideal for interfacing parallel and IEEE printers and disk drives and does not interfere with printers and disc drives using the serial port.

Batteries Included BI 80 Column Display does what it is supposed to do but beware of the loss of memory when not using **PaperClip**. This addon is equivalent to an 8k ROM and reduces the amount of memory available for BASIC programmes. You will notice this immediately on power up when your 64 will display 30719 bytes available instead of the familiar 38719. The 80 column display mode reduces the number of lines by about 50 percent. This is just about what you would expect since you now have 80 column lines instead of 40 column lines. The BI 80 is not compatible with version B. As mentioned earlier, the multilingual character display is not available when using this addon.

C-64 DISK OF THE MONTH

The C-64 Diek of the Month is carried in the stores listed below. It is in the stores two days after each meeting.

MGI Computer Corp.
1501 Carling Avenue

Compucentre
Carlingwood Mall and
Rideau Centre

Zap and Zoom
435 Kent Street

C-Plus
130 Albert Street, B8

C-64 GAME DESIGN
by John Batchelor

DESIGNING CRATER GUNNER
Part II
Ninth of a Series

This article continues the story of programming CRATER GUNNER, a game where you shoot incoming UFOs from the centre of a lunar crater. You must use a scanner to find the direction of attack and turn your laser turret to face that way.

Last month we had designed the landscape and the machine code to enable us to scroll around the crater. We used "coarse" scrolling; that is, a full character or eight pixels at a time. I wrote a smooth scroller which pans the screen one pixel at a time with a call to the coarse scroller every eight cycles. The effect was lovely except for two things. The scores, radar and other readings wobbled along with the moonscape. The effect is demonstrated in the game "ACROBAT" from COMPUTE! and probably on a D-o-t-M by now. Most distracting. Also, the speed was unsatisfactory. Even in total machine code, the moonscape is 8 * 256 = 2048 pixels wide and thus took 2048/60 = about 34 seconds to revolve once past the turret. This is at a rate of one pixel per jiffy; that is, once each interrupt. The first problem probably can be fixed with a raster interrupt. The second problem isn't worth fixing since faster or coarser scrolling would be indistinguishable from what we have now.

The next task is sprite design. The widest single sprite on a C64 is 48 pixels. This is the size of a 30 metre saucer which is 200 metres away, based on 2048 pixels to a circle. The smallest double-size sprite is 2 pixels wide. This means the saucers would become visible about 5 km away. All you game designers can do simple trigonometry, can't you? Now design a series of increasingly detailed saucer sprites which are 2, 4, 6, 8, etc. pixels wide up to a maximum of 48. You also need an exploding saucer and one for the gunsight. Don't forget the three sprites that will be superimposed to make the detailed blue, white and green planet Earth. These reside at locations $3FFF and down. Their sprite pointers are thus 255, 254, 253, etc. I use the sprite editor from the April '83 D-o-t-M which puts them right where they're needed.

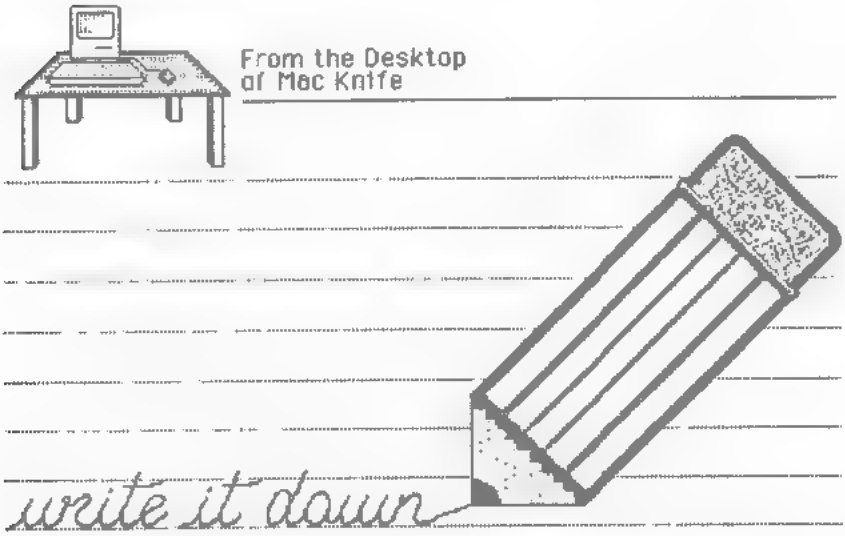
Let's figure out the motion now. Turning the turret at one character per jiffy takes just over four seconds. Therefore I allowed twice that to home in on each attacker. That's 512 jiffies. So for each of those instants, I calculated now wide it would be and set up a table of sprite pointers. Turns out that the saucer is 2 pixels wide for about half the time and 4 pixels wide for half the rest. Then it grows very rapidly at the end, reaching maximum size for only one jiffy. Because I couldn't fill the screen, I have the saucers swooping away overhead once they get to the closest point. Their speed works out to about Mach 2.

At this point, I start testing the machine code modules with small BASIC programs full of SYS statements. This is how I figured out how to position the Earth sprites. The moonscape is positioned by an index from 0 to 255 which gives the leftmost visible column. Sprites are positioned by calculating whether their

location (fixed at zero for the Earth sprites and randomly generated for the saucers) is part of the 320 pixel chunk of the horizon which is on the screen at any time. Sprite heights are handled easily. The gunsight is at the centre of the screen with its height going up and down with the joystick reading. I used acceleration and deceleration routines for the joystick readings. This gives a bit of a time lag in the joystick response and faster speeds. Thus a down reading on the joystick does not add one to the sprite Y location. Rather it adds one to the number which is added to the sprite Y each time (up to a limit). In this program, the Y increment varies between -2 and +2. It is updated 60 times a second which makes it a bit fidgety. This inertia is like handling a heavy gun. The moon's light mented and new X and Y locations are generated for the next invaders. If no hit is registered in the time allowed, besides zooming the saucer up off the screen, the energy score is reduced and the screen colour is decremented continuously to simulate a hit on the turret screens. Remember, no sound on the airless moon!

That completes the design of the subroutines. Next month, we'll wrap up the final assembly, testing and finishing touches.

★★★★★★★★★★★★★



... Please "write it down" and send it into the Newsletter. If you do, then we won't have to use filler material like this, and won't always be pleading for articles.

ONE-ON-ONE
continued from page 7

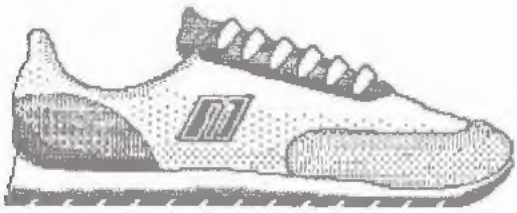
of basketball in the process. The promotional material describes, at some length, getting Julius Erving and Larry Bird (two of the most gifted and versatile players in the game) into a gym to photograph them in action; and subsequently to get extensive feedback on making the program reflect their experience. Through this process, factors such as fatigue, hot and/or cold streaks and favourite shots were incorporated.

The game itself is fairly (although that is not to say easy). You can choose to be Erving or Bird, playing against the computer or a human opponent. The offensive player can spin, dribble and shoot; fouls and turnovers are called for charging, travelling and violating the 24-second clock. On defense, your player can impede a drive, block a shot, and steal the ball; defensive fouls are called for hacking and reaching in.

Before you play, decisions can be made about the length of the game, who gets the ball after a basket, and the level of difficulty. This last factor is perhaps the most significant in terms of both initial enjoyment and on-going challenge. With four levels of difficulty, even the very inexperienced player can enjoy a basic competency while the more advanced player will be challenged beyond his initial expectations.

Defense, as any babbling sports announcer will tell you, is paramount, and "ONE-ON-ONE" provides no exceptions. Learning to move the ball around and the basics of when and where to shoot really doesn't require much; stopping the opposing player can be another matter, especially in the more difficult levels.

This is a game which will appeal to basketball fans for its uncanny ability to mimic the real thing. For anyone with secret fantasies of slam dunks and 30-foot jump shots, it is a must.



BULLETIN BOARD COMMANDS

For members who have a modem, but not a printer, the following is a list of commands for the club bulletin board. Keep it for a handy reference.

```
   HELP - Reprint this list

   A    - Read All Messages
   B    - Bulletin Section
   CONT - Toggle Continuous Mode
 * DM   - Delete a Message
   DUP  - Change Echoplex
   E    - Enter a Message
   EXP  - Expert Mode
 # F    - Forward Message Reading
   FROM - List Messages FROM a User
   G    - Goodbye (same as QUIT)
   LF   - Turn Off/On Line Feeds
   LOG  - System Usage Log
 * MINE - List Messages YOU Sent
   NEW  - Read NEW Messages
   NEXT - Continue READ Function
 * O    - Overview of Messages
   QUIT - Leave System
   R    - Recall a Specific Message
 # R    - Reverse Message Reading
 * RALL - Read Messages Sent to ALL
   READ - Read Only YOUR Messages
 * S    - Summary of Available Messages
   TIME - Show Current Connect Time
 * TO   - List Message Recipients
 * TOME - List Messages TO You
   U    - User Log

 * indicates that a parameter (message number) may be
   included
 # indicates that a parameter (message number) must be
   included
```

Software for Commodore-64

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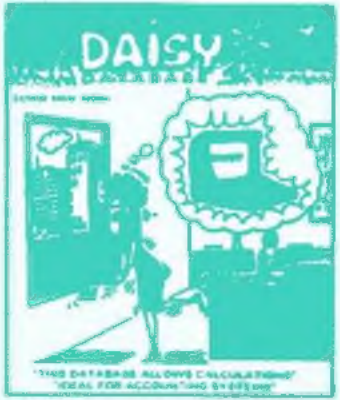

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